

CLOSING

13.0 CLOSING

All surface acreage affected by Rogers mining activity will be restored to a land use condition as good as, or identical with pre-mining land use. Exception to this would be any prior surface restoration agreement with the land owner and/or any restoration condition imposed by the State of Texas. Basic closing procedures are outlined below.

13.1 Class III Wells

After aquifer restoration has been accomplished all lateral and master manifold pipelines will be removed from the property. Lines that are not reusable will be decontaminated and disposed of by salvage, sale or destruction. Salvageable lines will be held for use in other in-situ leach activities. All well head equipment, i.e. valves, meters, control panels, etc. will be salvaged or destroyed in alike manner.

All production, injection, and monitor wells will be plugged and abandoned in the following manner. First, a cement plug will be placed in the well bore from total depth to a level at least 50 feet above the completion interval. Thereafter, the casing will be filled with drilling mud from the top of the bottom plug to a level 15 feet below ground surface. The casing will then be cut at the top of the cement and the upper three feet will be pulled. The resulting hole will be backfilled with native soil. Two exceptions could possibly be made to this procedure. If the landowner should desire to leave a well or wells open, it will be done after informing the landowner of the water quality of the well(s). In addition, an alternate plugging method would be to fill the well bore entirely with cement, up to 3 feet level. Such action will be taken after informing the State of Texas.

13.2 Surface Plant

All surface structures will be removed from the property after mining activity has ceased. Tanks, lines, pumps and structural steel will be disposed of in a manner similar to that for well field equipment. Concrete pads will be decontaminated by acid scrubbing, demolished and disposed of in an appropriate solid waste facility.

All fluids held in waste retention ponds will be evacuated and disposed by deep well injection. Any remaining solid waste will either be solubilized and injected as above, or drummed and shipped to a licensed L.S.A. disposal site. Thereafter, the pond liner will be decontaminated, folded and placed in the bottom of the pond. Two feet of impermeable clay will be placed on top of the liner. Pond embankments will then be placed over the clay and graded to a crown in order that water will not be impounded on the pond site. This surface will be seeded with grass to preclude erosion.

Power poles, phone lines and other equipment will be retained at the discretion of the landowner. Office and maintenance structures will be removed and stored for further use.

13.3 Class I Wells

The procedure for plugging and abandonment of the well will be used if the waste disposal operations are discontinued or if the well has reached the end of its useful life. All such work will be accomplished in accordance with the applicable rules and regulations of the TDWR that are in effect at that time. The following proposed plugging procedure is designed to seal the injection well bore and prevent possible contamination of upper strata containing fresh water:

1. Notify the TDWR of intent to plug and abandon well. Submit and obtain approval of the final plugging and abandonment prognosis.
2. Prepare location for workover rig.
3. Move-in and set-up rig and equipment.
4. Kill well with 10#/gal. brine (if required).
5. Remove 2 7/8" injection string and packer.
6. Run logging surveys including Casing Inspection Survey and Cement Bond Log (CBL) or Radioactive Tracer Survey.
7. Fill permitted interval with mud by mud balance plug method. Mud density determined on maximum formation pressure build-up.
8. Set plug in casing at + 4300'. Test casing to 1000 psi for 30 minutes.
9. Dump 50' acid resistant cement on top of packer (or bridge plug) using a dump bailer. Tag top of cement plug.
10. Fill protection casing to surface with cement by balance plug method in stages.
11. Cut off casing 3' below ground level and weld steel plate to top of casing. Inscribe on plate the following information:
 - a. Disposal well number.
 - b. Location.
 - c. Date of plugging and abandonment.
 - d. Owner of well.
12. Rig down and move off all equipment.
13. Backfill and restore location.

The procedure described above is estimated to cost approximately \$40,000.